



Westmoor Phase 1 Road Dedication Analysis



Prepared by Marwall Associates LLC
January 22, 2015

Cause and Effect



No, you can't collect my client's soul. His personal bankruptcy wiped out ALL debts.

▶ **Original Developer (RKL Leone) bankrupt**

- Business and Personal
- HOA not protected for future costs in Bankruptcy

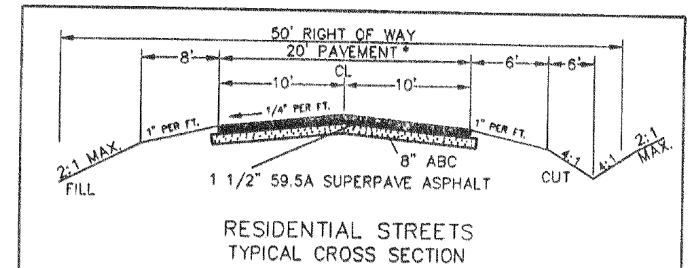
▶ **Developer did not:**

- Follow up on Drainage Plan
- Follow NCDOT standards on installation of Culverts and site Drainage
 - Result is minimal impact on select site drainage along the roadside ditch
- Maintain Drainage and approved outflow
- Remediate Road Side Erosion
- Remediate Temporary Drainage Areas
 - Result is that select area(s) need to be re-graded
 - Mosby way outflow
 - Inflow to crossing at Olde Pender way from North/East corner of Burgwyn Lane
 - Cleburne Ditch on East Side of Cleburne
 - Common Space Temporary Drainage
- Phase 1 Common Space cleanup not completed
 - Result is that the "Kudzu Lot" on the South Side of Burgwyn at Curve to Phase 2 requires cleanup and dismantling of Initial Site retention basin to properly feed water to the Wetlands



▶ **Roadside and Ditch Maintenance**

- Not maintaining clear driveway culverts
- Not maintaining ditch to Road shoulders area erosion
- Filled in Ditches in violation of NCDOT Standards
 - Result is generally minimal impact on select site drainage along the roadside ditch
 - Mosby Way convergent area was impacted by the increased flow and velocity at the merge point.



Road Pavement



ACTION	DOT Repair and Seal	Non DOT Non Dedicated Seal	Non DOT Non Dedicated Preventative Maintenance
Cut Patches <i>(92 Sq Yds)</i> 7 Full Depth Patch's at Old Penders Way, Pegram, Mosby, Cleburne	\$6,300	<i>As required</i>	<i>As required</i>
Crack Seal	\$1,725		\$1,725
Joint Sealer Curb Seal and Patch at Entrance Gutters	\$1,370	\$1,370	\$1,370
Seal Coat <i>(9560 Sq Yds)</i>	\$9,500	\$9,500	
Total	\$18,895	\$10,870	\$3,095



Road Related Landscape and Drainage



Action	Area / Location	Cost
Non-Conforming Ditch Piping Removal (300+ Ft of Removal)	7824 Olde Pender Way, 8013 Burgwyn, 8116 Mosby, 7748 Pegram	In Estimate ~ \$2.5K – \$5K / Lot <i>Owner responsibility</i>
General Ditch Re-grading and Roadside Shoulder Repair includes Driveway erosion repair <i>(7000' of Roadside and Ditch)</i>	Various – May not be inclusive Old Pender Way – 7809 , to 7813, 7824 Burgwyn La – 8008, 8008 to inflow Shoulders Pegram, –7617,7725,7728,7729,7737,7748,7753, 7769,7773, 7777, Cleburne – 7748 to 8105 Re-grade Shoulder Mosby – 8110, 8112 Mosby + Pegram Side Ditch James Austin Rd Ditch Inflow and Outflow	In Estimate – \$400–800 / Lot impacted
Olde Pender Way – Outflow of ‘Spoils Area’ and related Inflow Ditch Rework	Open Tree Area at 7809 Olde Pender Way	In Estimate – ~ \$2K
Pegram and Cleburne Ditch Re-grading <i>(~ 300 ft)</i>	Corner to , HOA Common Easement Outflow at Cul- de-sac (7737 Pegram Outflow)	In Estimate – ~ \$2.5K – \$7K
Mosby Way Drainage Outflow	8116 Mosby, 8117 Mosby, HOA Common Easement	In Estimate – ~ \$3K – \$8K
Olde Pender Way – Burgwyn Corner	Inflow Drainage , Full Patch Repair, Shoulder Rebuild	In Estimate – ~ \$3K – 5K
Common Space cleanup not completed	the “Kudzu Lot” on the South Side of Burgwyn at Curve to Phase 2	\$ 5K – 10K ROM
ESTIMATED_COST		\$14K – 35K



Misc Conformance Items

Action	Area / Location	Cost
Right of Way Vegetation Violations	7616 Pegram Bush cut to Less then 40 inches 7612 Pegram Tree Removal	<i>Owner responsibility</i>
Cleburne Basketball Goals	Cleburne - 8100,8113 Remove Basketball Goals from Right of way	<i>Owner responsibility</i>
Irrigation Pipe thru Culvert	7612 Pegram	<i>Owner responsibility</i>
6 Stop Signs	\$~100+ ea	\$ 500-600



Basket Ball Hoops



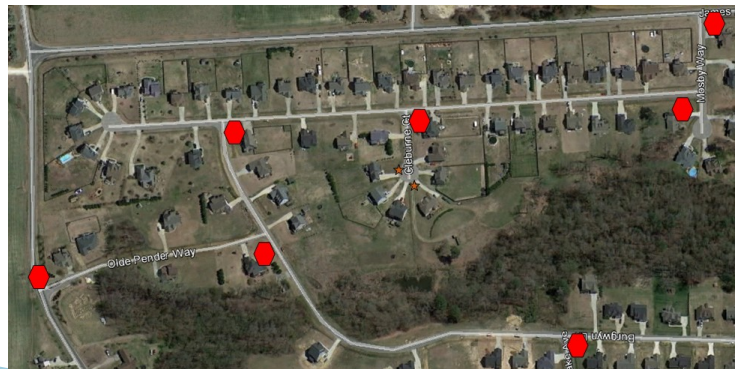
Bushes in Right of way



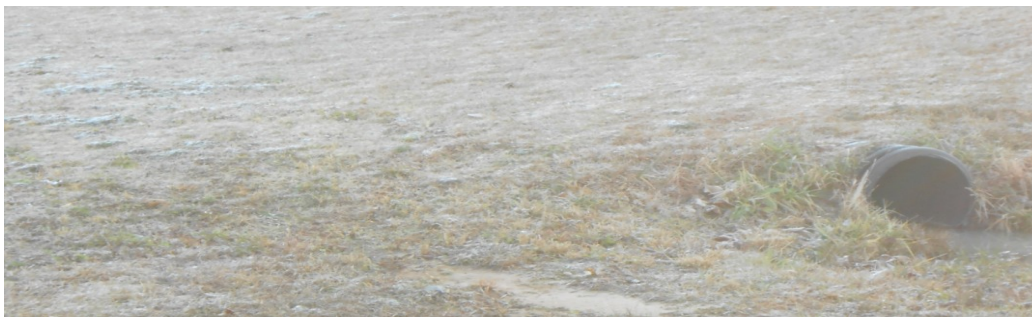
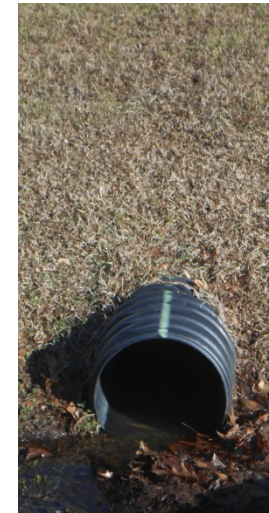
Trees in Right of way



Irrigation Pipe thru Culvert



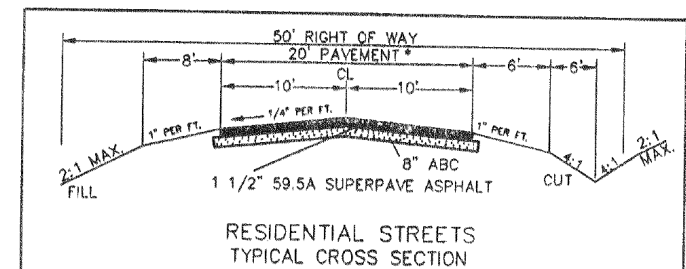
Non-Conforming Ditch Piping



Ref: Drainage User Manual – NCDOT

- ▶ Original Ditch must be reconstructed to original and DOT specification and Fill and culverts removed
 - ▶ 7824 Olde Pender Way, 8013 Burgwyn, 8116 Mosby

- ▶ Liability for the Cost of these corrections would be to the Owners



Non-Conforming Driveways

- ▶ **Secondary Driveways not to Specification**

- ▶ Must have 12" cover
- ▶ Some driveways may not be able to get minimum cover. In these situations, every effort should be made to achieve minimum cover and any deviations from the minimum requirements will require prior approval from the responsible NCDOT Engineer.

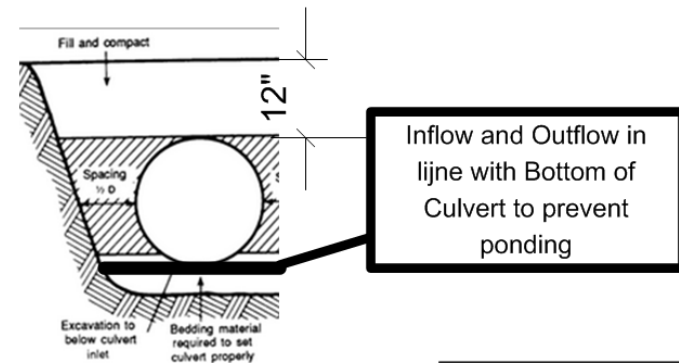


Driveway Type	Minimum Cover Required
Private Residential	12 inches (excluding any pavement used)
Residential Subdivision	12 inches (excluding any pavement used)

Ref: Drainage User Manual - NCDOT

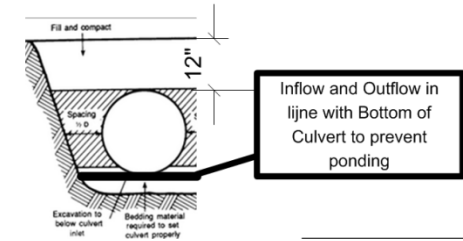
- ▶ **Liability for the Cost of these corrections would be to the Owners**

- ▶ 7824 Olde Pender Way
- ▶ 8013 Burgwyn
- ▶ 7748 Pegram
- ▶ 8100 Mosby
- ▶ 8116 Mosby



Driveway Culvert Drainage Repairs

- ▶ Identified Locations per DOT List
- ▶ *Standing Water - Fill level*
 - Inflow must positive flow into Culvert at Bottom of Culvert elevation
 - Outflow must not have standing water at Bottom of Culvert elevation
 - Water not held in Culvert
 - Re-grade Ditch for 4-15 feet depending on location
- ▶ Non Conforming Cover under Concrete driveways exempted as long as the Invert and Discharge flow is maintained to a positive drainage.



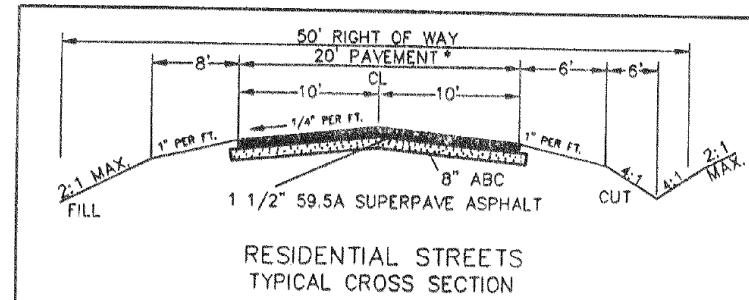
Ditch Re-grading and Roadside Shoulder Repair



Re-grading and Roadside Shoulder Repairs



- Match Ditch Profile
- Less than 1" drop of Road Surface



Common Space Drainage Lot

- ▶ Developer did not complete work when Phase 1 was completed
- ▶ the “Kudzu Lot” on the South Side of Burgwyn at Curve to Phase 2 requires:
 - ▶ Cleanup
 - ▶ Dismantling of Initial Site retention basin
 - ▶ Spreading or removal of Stockpiled Dirt
 - ▶ Sloped and buffered to properly feed water to the Wetlands



Mosby Way Outflow



▶ Shared Cost Project

- Outflow Connector requires Rip Rap to divert water without erosion
- Rebuilding of outflow Ditch
 - HOA Responsibility
- Original Road Ditch must be reconstructed to original and DOT specification and Fill and culverts removed
 - 8116 Mosby – Liability for the Cost of these corrections would be to the Owners



Cost Impact Summary

Plan	Cost/ Homeowner	Roads	Landscape and Other	Comment	Cost Summary
Move towards Dedication <i>Overcoat Seal and Full Road Fix</i>	\$35K – \$73 K <i>Possible Special Assessment</i>	\$19 K	\$16 K –\$35K	\$14,500 Bond would apply Roads – Overcoat Seal and Full Road Fix Landscape – Full Fix Homeowners cover cost of ALL Non-compliant ditch's and misc items	\$1,700 remain in Maintenance Fund on Low side Short \$25K High Side <i>Expected to be ~ \$300 –\$500 / Homeowners</i> <i>Dues reduction after completion</i>
Keep Roads Private <i>Roads Coating</i>	\$19 K – \$50 K	\$11 K	\$10 K <i>As Required</i>	\$14,500 Bond would Not apply Roads – Overcoat Seal Landscape – Partial Fix Establish a Preventative Maintenance and Fix Plan Homeowners cover cost of Non-compliant ditch's and misc items needing to be addressed	No Special Assessment \$1,200 remain in Maintenance Fund <i>Rebuild the fund over time</i> <i>Partial reduction / Adjustment of Dues after safety fund rebuilt</i>
Keep Roads Private <i>Minimum Road work</i>	\$3,000 – \$30K	\$3 K	\$10 K <i>As Required</i>	\$14,500 Bond would Not apply Establish a Preventative Maintenance and Fix Plan Homeowners cover cost of Non-compliant ditch's and misc items needing to be addressed	No Special Assessment \$9,200 remain in Maintenance Fund <i>Increase the fund over time</i> <i>Partial reduction / Adjustment of Dues after safety fund rebuilt</i>



Funding Point Budgetary Data

Amount

Present Capital Fund	\$22,200
State Bond on Hold	\$14,500
Annual Dues to Road Fund without Special Assessment	\$2,500



Options

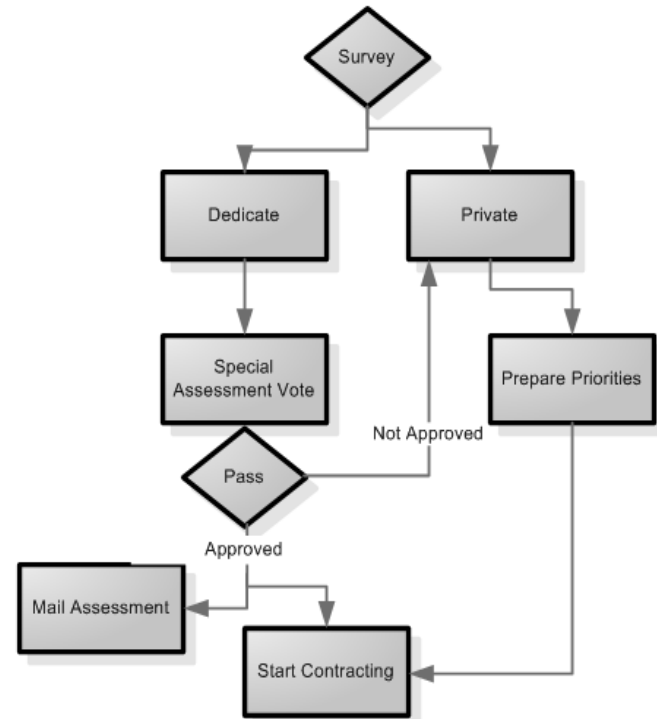


- 1) **Dedication of Roads** – Move forward to DOT Plan
 - Special Assessment will be required.
 - Special Assessment vote will be per Covenants before approval
 - Failure to pass will force Keeping Roads Private

Maintain Reserve Fund for Future needs related to ditches not in DOT Maintenance

- 2) **Keep Roads Private** – NON Dedicated Roads
 - Establish a Road Related Maintenance Plan
 - Maintain Reserve Fund for Future need

A survey will be at the meeting, with non binding voting by Lot Owners on the options and Special Assessment to be utilized as guidance to the Board on how to proceed based on people at the meeting



Dedicated Road Action Plan Recommendation



- ▶ **Schedule Special Assessment Vote**
 - Will impacts ALL Owners
 - Establish Special Assessment and Voting Mailing

- ▶ **If passed – Establish a Contract Plan**
 - ▶ **Special Meetings with Select Owners**
 - Special Items such as Ditch Removal
 - Major Ditch Changes
 - **Bill Assessment** – Must have funds to cover contract
 - Begin action Contracts
 - Repairs to meet NCDOT Inspection

- ▶ **If Not passed – Establish a Maintenance Plan**
 - ▶ Execute select Maintenance items
 - ▶ Notification of Future responsibilities on Non Compliant Items
 - ▶ Special Meetings with Select Owners

Section 4. SPECIAL ASSESSMENTS FOR CAPITAL IMPROVEMENTS. In addition to the annual assessments authorized above, the Association may levy, in any assessment year, a special assessment applicable to the year only for the purpose of defraying, in whole or in part, the cost of any reconstruction, repair or replacement of a capital improvement upon the Common Area, including fixtures and personal property related thereto, provided that any such assessment shall have the assent of two-thirds (2/3) of the votes of each class of members who are voting in person or by proxy at a meeting duly called for this purpose.

(57 Owners)




Private Road Action Plan Recommendation

- ▶ **Install 6 Stop Signs – – Underway**
- ▶ **Establish Maintenance District**
 - Fund these districts with Annual Maintenance Assessment to establish Fund
 - Road Repair as needed to meet NCDOT Specification
 - Future repairs paid by District Maintenance Fund
- ▶ **Establish a Maintenance Plan with Priority for Funding**
 - **Action Plan Priorities**
 - Mosby Way Drainage
 - Select Shoulder / Ditch Repair
 - Burgwyn
 - Pelgram
 - Burgwyn/ Olde Pender Inflow
 - Preventive Maintenance Sealing
 - Initial PM Items (Cracks and Joint Sealer)
 - Overcoat in 2 Years – Establish Contract now
 - **Future Responsibilities**
 - Notification of owners in HOA concerning future responsibility of correction of non conformance to meet NCDOT requirements.
 - Individual Ditch Inflow and Outflow Notification Responsibilities
 - Owners should notify potential buyers
 - HOA Notification to future owners at time of Dues Review for closing



NCDOT Punch List

- ▶ Punch List dated Feb 03, 2015 follows this page in online PDF


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 3, 2015

COUNTY: Wake

SUBJECT: Westmoor Subdivision Phase 1

Kirt Leone
5822 Carriage Farm Drive
Raleigh, NC 27603

Mr. Leone,

In response to your petition request for addition, an investigation has been conducted on Mosby Way, Pegram Street, Cleburne Court, Burgwyn Lane, and Olde Pender Way in Westmoor Subdivision Phase 1.

While these roads were found to serve a sufficient number of homes for addition, they were not found to be in an acceptable state of maintenance at the time of our investigation.

This punch list will expire 60 days from the date of this letter. If the punch list items have not been completed and the District Office notified within the 60 days an additional punch list shall be required. Additional punch list items may be added at that time. Please address the following:

1. **Encroachment agreements for all utilities must be submitted to this office prior to recommendation for addition. Please have each utility company submit 5 copies of the 16.1 encroachment agreement form accompanied by 5 site plans showing the locations of the utilities.**
2. A fog seal is necessary over the entire road due to pavement deterioration.
3. Minor skin patching of the pavement is needed at various locations.
4. A full depth asphalt patch of 4 inches B25.0B and 2 inches SF9.5A is required where the pavement is failing. All patches are required to be sawcut to provide a clean, uniform edge to pave to. It is the developer's responsibility to insure that all necessary pavement deficiencies have been addressed properly.
5. All utility dips must be repaired with 4 inches of B25.0B and 2 inches of SF9.5A Asphalt.

MAILING ADDRESS: TELEPHONE: 919-733-3213
NC DEPARTMENT OF TRANSPORTATION FAX: 919-715-5776
DOH DISTRICT1 LOCATION:
1575 MAIL SERVICE CENTER 4009 DISTRICT DRIVE
RALEIGH NC 27695-1575 WEBSITE: WWW.NCDOT.GOV/DOH1 RALEIGH NC 27607





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5. All utility dips must be repaired with 4 inches of B25.0B and 2 inches of SF9.5A Asphalt.

6. In several areas, the turning radii must be widened to accommodate the existing traffic pattern. A pavement design of 4 inches of B25.0B and 2 inches of SF9.5A must be utilized.
7. The placement of driveway pipes must allow for a minimum of 8 inches cover for reinforced concrete pipes, while maintaining the required driveway grade. Double walled HDPE corrugated plastic pipe must have a minimum of 12 inches of cover.
8. Grade ditch line to invert of driveway pipe to allow positive flow of water.
9. Minor regrading is needed to repair shoulders and ditches that are washing, rutting and holding water. Grading is required to achieve unobstructed positive drainage flow at lot.
10. The placement of driveway pipes must allow for a minimum of 8 inches cover for reinforced concrete pipes, while maintaining the required driveway grade. Double walled HDPE corrugated plastic pipe must have a minimum of 12 inches of cover.
11. All bare and disturbed areas must have a sufficient stand of vegetation before the roads may be added to the State Maintained System. Monitor these areas as needed to assure this requirement is satisfied.
12. The right of way must be cleared of all trees, shrubs, debris, etc.
13. All posts, sticks, rocks, and other debris other than mailboxes must be removed from the shoulder area.
14. All cross line and driveway pipes must be cleared free of silt and debris.
15. Speed Limit signs and "Reduce Speed Ahead" signs shall be reviewed and approved for official ordinances by Andy McKay, Deputy Division Traffic Engineer, contacted at (919) 220-4600.
16. We work with the Wake County Community Development Services (CDS) to determine if the subject roads are in compliance with the County's sedimentation and erosion control ordinances. We will be soliciting their comments as part of our total investigation. If you wish to contact Wake County CDS, please call Melinda Clark at (919) 856-5531.

Prior to addition, a final field investigation shall be conducted at which time additional repairs may be required to bring the road(s) to an acceptable state of maintenance. For questions or concerns pertaining to the items of this report feel free to call Derrick Waller, Assistant District Engineer, at (919) 733-3213.

Sincerely,



T. R. Elmore
District Supervisor

TRE/spb
Attachment

cc: Stacy Harper, Wake County
Kevin Walls

Intersection of Old Pender Way and Bud Lipscomb Road

1. Seal curb and gutter joints.
2. Tie 4:1 asphalt taper from back of curb.
3. Skin patch asphalt to obtain positive drainage to curb and gutter.

Old Pender Way

1. #7804 – A full depth patch is required in front of the driveway. Remove dumpster from right of way.
2. #7809 – Remove drain from ditch. Re-grade ditch for positive drainage. A full depth patch is required. Repair erosion under driveway.
3. Lot 31 – Repair low shoulders and high shoulders.
4. #7809 to #7813 – Re-grade ditch for positive drainage. Repair plunge pool at outlet of crossline.
5. #7813 – Remove silt and debris from ditch.

Intersection of Olde Pender Way and Burgwyn Lane

1. Full depth patches are required.
2. Regrade ditch for positive drainage.
3. Repair low shoulder.

Burgwyn Lane

1. #8008 – Re-grade ditch for positive drainage.
2. #8008 to Pegram Street – Repair low shoulders on both sides of the road.
3. #8013 – Remove piped frontage.
4. #7728 (Pegram St.) – Full depth asphalt patch.
5. #7824 (Old Pender Way) – Remove piped frontage; gravel driveway does not meet minimum cover.

Pegram Street

1. #7612 – Remove tree from right of way. Remove PVC pipe from driveway pipe.
2. #7616 – Vegetation shall not exceed 42” in height.
3. #7617 – Re-grade ditch for positive drainage.
4. Repair utility dip between #7621 and #7617.
5. #7713 – Repair scour at inlet of driveway pipe.
6. #7725 – Re-grade ditch at outlet of driveway pipe for positive drainage.
7. #7728 – Remove silt and debris from outlet of driveway pipe.
8. #7729 – Re-grade ditch at outlet of driveway pipe for positive drainage.
9. #7737 – Repair scour hole.
10. At intersection of Pegram Street and Cleburne Court – Re-grade ditch to inverts of crossline for positive drainage.
11. #7748 – Repair low shoulder. Second driveway does not meet minimum cover.
12. #7753 – Regrade ditch at outlet of driveway pipe for positive drainage. A full depth patch is required.
13. #7769 – Repair low shoulder.
14. #7773 – Re-grade ditch at outlet of driveway pipe for positive drainage.
15. #7777 – Re-grade ditch for positive drainage.

Cleburne Court

1. #7748 to #8105 – Re-grade high shoulder for positive drainage.
2. #8100 – Remove basketball goal from right of way.
3. #8113 – Remove basketball goal from right of way.

Intersection of Mosby and Pegram

1. Re-grade ditch at the crossline for positive drainage.

Mosby Way

1. #8100 – Regrade ditch for positive drainage.
2. #8112 – Regrade ditch for positive drainage.
3. #8116 – Remove piped frontage.
4. #8117 – Full depth asphalt patch.
5. Drainage easement between #8116 and #8117 – Repair erosion at drainage easement.

Intersection of Mosby Way and James Austin Road

1. Remove silt debris from flared end section and from around flared end section.
2. Seal pavement joint.
6. Repair erosion around outlet of crossline.
7. Regrade ditch for positive drainage.